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EXAMINER
ROBERTSON, DAVID

ART UNIT	PAPER NUMBER
3623	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	09/987,905	ADENDORFF ET AL.
Office Action Summary	Examiner	Art Unit	
	Dave Robertson	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 June 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21,23 and 25-49</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-21,23 and 25-49</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This is a Final office action over pending claims 1-21, 23, and 25-49.

Response to Amendment

2.   In the Reply of 6/22/2007, Applicant cancels claims 22 and 24 and adds claims 45-49 directed to various computer-implemented embodiments of the methods and system of the invention previously claimed.

3.   In the Claims listing of the Reply of 6/22/2007, claim 24 is not indicated as cancelled, however, claim 44 is indicated as cancelled. ...

Response to Arguments

4.   Applicant's arguments filed 6/22/2007 have been fully considered but they are not fully persuasive:

a.   Applicant argues claims 1-6 read in light of the claims and specification that *the multiple organizations* are clear and have proper antecedent basis in the claims.

Applicant's remarks submit that organizations within the multiple organizations may be any organizations, business, profit or non-profit, commercial, non-commercial or government. Applicant states that organizations "need not be related" (Remarks, page 17), and each of the organizations may, as prescribed by the invention, configure the non-configured data warehouse into a separate and distinct data warehouse.

Applicant does not state that the organizations are specifically unrelated, that is, the multiple organizations may be organizations within other organizations which may or may not be related.

Applicant's clarification on the meaning and scope of *the multiple organizations,* taken in view of the claims as presented and a broadest reasonable interpretation in view of terms readily understood to one of ordinary skill in the art (dimensions and measures are database tables and values; settable placeholders are custom fields), the clarification defines the scope of the independent claims as *any data model configurable for multiple organizations configured or configurable to represent a single organization* along with *the methods, systems, and computer programs thereof.* As such, Applicant's claim encompasses substantially any database software customizable by any organization, and any database model configured thus.

Examiner agrees and thanks Applicant for clarification on the scope of claims. The rejections under 35 USC 112(2) for claims 1-6 are hereby withdrawn.

b.   Applicant argues that neither Weissman et al (US Pat. 6,212,524 "Method and Apparatus for Creating and Populating a Datamart" and US Pat. 6,161,103 "Method and Apparatus for Creating Aggregates for Use in a Datamart" to Rauer with common inventor Weissman, 1998) nor Harmony Software, Inc. (WO 00/425543 "Methods and Apparatus for Processing Business Information from Multiple Enterprises") teach or suggest a data warehouse system for managing

performance of organizations comprising a data model for storing data

representing dimensions and measures applicable to multiple organizations, the

data model having placeholders settable such that the data model represents a

particular organization; and a configuration unit for setting the placeholders such

that the data model represents the particular organization. Specifically, Applicant

argues neither Weissman nor Harmony, alone or in combination, teaches or

suggests that the data model (in the prior art) is applicant to multiple

organizations and configurable to a particular organization, and therefore cannot

teach or suggest claim 1, its dependents and the remaining claims of similar

scope.

Examiner disagrees: Given the claims as presented their broadest

reasonable interpretation of *any data model having tables and data values, and*

custom data fields configurable for multiple organizations and configured to

represent a single organization, the claim is encompassed substantially by any

database software customizable by any organization or any data model

configured thus. Both Weissman *and* Harmony disclose methods and a system

having a data model (data mart/data warehouse) with dimensions and measures,

and placeholders configurable for multiple organizations and configured to

represent a single organization. Harmony was cited merely to provide *explicit*

motivation that such data warehousing tools are obvious to use for *multiple*

organizations.

c.   Applicant cites many reasons why either Weissman or Harmony work

differently (not configurable or integrated; not reconfigurable, and other "specific

technical differences"); are directed to represent entities within a single

organization as opposed to a particular organization of multiple organizations; or

do not have "placeholders", i.e. "parameters that allow for data to be configured

to represent a particular organization; or have a narrow data model as opposed

to the broad breadth of the data model of the invention (Remarks, page 21).

However, these points are moot as they are not claimed, and where

claimed addressed in rejections not traversed in Applicant's Remarks.

5.   Accordingly, the rejections of the prior office action are maintained as reproduced

below.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1-21, 23, and 25-49 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Weissman et al (US 6212524 B1 "Method and Apparatus for

Creating and Populating a Datamart" and "Method and Apparatus for Creating

Aggregates for Use in a Datamart" US 6161103 to Rauer with common inventor

Weissman, co-filed May 6, 1998) in view of Harmony Software, Inc. (WO 00/425543

"Methods and Apparatus for Processing Business Information from Multiple

Enterprises").

Weissman discloses a configurable software framework for creating, populating,

and maintaining business-directed dimensional data marts for a particular organization

from an enterprise data warehouse, including configurable connectors used to access

and aggregate multiple data sources, with emphasis on building a single data mart for

one of "multiple organizations" as defined above.

Harmony discloses a configurable software framework for creating, populating,

and maintaining business-directed dimensional data marts for a particular organization

from an enterprise data warehouse, including configurable connectors used to access

multiple data sources with emphasis on building data marts across an enterprise.

Claim 1

Weissman discloses a data model storing dimensions and measures (Figure 7

and Dimension Related Tables, column 14), the data model having settable

placeholders (column 14, discussion of attribute setting including default values); and a

configuration unit for setting the placeholders for a particular organization (see

Enterprise Manager Interface, Figures 7-33 and related discussion); however,

Weissman does not expressly disclose "a data model applicable for multiple

organizations."

It is old and well known in the art of data warehousing that each organization,

within a single company or across an enterprise, has different business needs, and

each may have its own local data warehouse or datamart populated from data sources

of a company or enterprise. (See Sen and Jacob, "Industrial Strength Data

Warehousing", Communications of the ACM, Special Issue on Data Warehousing,

September, 1998.) The organization-focused decision-support capability of a

dimensional datamart is precisely their advantage over attempting to extract data from

enterprise resource planning (ERP) systems and on-line transaction processing OLTP

systems, or from the vast data stores of a company-wide data warehouse. It is also old

and well known that systems using data sources across organizations within a single

company or across an enterprise require accessing and harmonizing the various types

of data and database systems (Kimball, The Data Warehouse Lifecycle Toolkit, 1998,

Chapter 9 "The Back Room Technical Architecture", pg. 357). Though Weissman

teaches creating and customizing datamarts for a particular organization employing

"connector" technology for the extraction of data from data sources, Weissman does not

expressly give examples of building multiple datamarts for a different one of multiple

organizations.

Harmony expressly discloses creating dimensional data warehouses for different

organizations across an enterprise of multiple companies, or within a company having

multiple divisions (see Harmony, pages 2, 3 and 5). In view of Weissman's teaching of

building datamarts for an organization, though not restricted so, and Harmony's

teaching of building datamarts for multiple organizations, it would have been obvious to

one of ordinary skill in the art at the time of the invention to employ Weissman for a

particular organization, and then employ Weissman for a second and third organization,

thereby providing datamarts for multiple organizations. Doing so would have built for

each organization of multiple organizations a datamart focused on their business needs,

thereby providing more relevant data to answer their business questions and to make

better decisions relative to their organization's needs.

Claim 2

Weissman discloses a data model storing dimensions (column 14 "Dimension

Related Tables") and measures (Figure 1 (168) and column 13 "Fact Related Tables"

and "measures are bits of data in fact tables" at column 6 "Definitions") and

relationships between dimensions and measures allowing the use of common

dimensions for analysis by multiple organizations, including cross-function analyses

(Figure 7 in the Constellations section of the tree, Sales..Measures and

Expense...Measures). *Sales* and *Expense* functions are cross-functional analyses. By

the reasoning of claim 1 motivating the building of datamarts from a data model

applicable to multiple organizations, using the teaching of Weissman in view of

Harmony, Weissman intrinsically provides for measures to use common dimensions

across functional areas in at least the dimension of "Customer" (see Figure 8, Base

Dimension (810) Item "Customer").

Claim 3

Weismann teaches groupings of common (base) dimensions applicable to the

"Sales" organization (Figure 8, "Sales..Dimensions" at (820)).

Claim 4

Weissman teaches dimensions having placeholders defining at least one of ...a

category settor...defined by the user (see Figure 10 Dimension Windows (1000) setting

a Customer Region Code).

Claim 5

Weissman teaches measures having placeholders defining at least one of ...a

currency settor...defined by the user (see Figure 30 Measure Selections Units for

CURRENCY).

Claim 6

Weissman teaches a configuration unit (the Enterprise Manager Interface,

Figures 7-33) having at least one of...a currency settor...defined by the user (see

Figure 30 Measure Selections Units for CURRENCY).

Claim 7

Weissman teaches connectors for extracting data with settable parameters

(Figure 24 and related discussion on Extraction Interface Elements, e.g. column 36).

Claim 8

Weissman teaches connectors for extracting data with pre-defined and user-

defined parameters specifying a particular data source system (Figure 19 "Input Data

Store" and related discussion on Extraction Interface Elements, e.g. column 36).

Claim 9

Weissman teaches connectors with settable parameters for the local

environmental data store (Figure 20 "Data Store Window (2000) "Data Store Type").

Claims 10-12

Weissman teaches a configuration unit (the Enterprise Manager Interface (192))

setting the type of database system for the connector, e.g. Microsoft SQL Server, a

local "environmental" data source parameter. The setting of the database type by the

Enterprise Manager Interface is the setting of a parameter (claim 10), a source detail

(claim 11), and an environmental setting (claim 12).

Claims 13 and 14

Weissman teaches connectors comprising extraction transformation loading

(ETL) software (Figure 22, see "Connector Steps" and within "SQL Statement"). SQL

statements are extraction transformation loading code applied against SQL databases

in the Extraction Program unit of Figure 1 (20) and related discussion.

Claim 15

Weissman teaches transforming data from online transaction processing systems (OLTP) to datamarts and from data warehouses to multidimensional datamarts (see Background, column 1); however Weissman does not expressly teach using as a data source an enterprise resource planning (ERP) system.

ERP systems are database systems similarly comprehensive to a company or enterprise and similarly disadvantaged as OLTP for decision-support compared to what business-focused dimensional datamarts provide. Companies and enterprises may have one or both types of systems either providing substantial data on the business activity of interest to multiple organizations.

Harmony specifically mentions ERP systems as a data source for dimensional datamarts. Recognizing the similar disadvantages of OLTP and ERP systems for decision support, it would have been obvious to one of ordinary skill at the time of the invention that the advantages of Weissman over OLTP systems would apply as well to ERP systems, adding to the class of data sources ERP systems. Thus recognizing ERP as a data source would enable multiple organizations of those companies using ERP only, or both ERP and OLTP systems, to access and use the vast stores of data provided by each, thereby building more complete and accurate dimensional datamarts for their business analysis needs.

Claim 16

Weissman teaches an operational framework (Figure 1) with a configuration unit (the Enterprise Manager Interface –192), which is a console for configuring the data warehouse.

Claim 17

Weissman teaches a content explorer and reporting unit (see Figure 1 Query/Reporting Program--104 and Query/Results Interface—184). The Enterprise Manager Interface—192 is a metadata content explorer.

Claim 18

Weissman teaches or suggests the data model and configuration unit elements as in claim 1 (see discussion above) in the process (flowchart of Figure 2 unlabeled) of creating a data warehouse and using the configuration unit (Figure 7 to Figure 33 and related discussion) to set the model parameters.

Claims 19 and 20

Weissman teaches or suggests the data model and configuration unit elements as in claim 1 (see discussion above) and connectors extracting data with pre-defined and user-defined parameters specifying a particular data source system (Figure 19 "Input Data Store" and related discussion on Extraction Interface Elements, e.g. column 36) in an operational framework (Figure 1) having a configuration unit (Enterprise Manager Interface –192), which is a console for configuring the data warehouse.

<u>Claim 21</u>

Weissman teaches connectors comprise extraction transformation loading (ETL)

software (Figure 22, see "Connector Steps" and within "SQL Statement"). SQL

statements are extraction transformation loading code applicable against SQL

databases for use in the Extraction Program unit (Figure 1 (20) and related discussion).

<u>Claims 23-43 and 45-49</u> recite variations of embodiments of the present

invention reciting substantially similar elements corresponding to claims 1-21 and are

rejected for reasons corresponding to the relevant claims and claim elements as

discussed above.

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

The following teach methods of designing systems and system tools for a data

model (data mart/data warehouse) with dimensions and measures, and placeholders

configurable for multiple organizations and configured to represent a single

organization:

Bontempo and Zagelow ("The IBM Data Warehouse Architecture",

Communications of the ACM, September, 1998, v41, n9) also teaching IBM's

"packaged solution... IBM Visual Warehouse... an integrated, rapid start-up data

warehouse and data mart deployment and management system.

Kimball et al (The Data Warehouse Lifecycle Toolkit, Wiley, 1998) and Kimball

(The Data Warehouse Toolkit, Wiley, 1996) also teaching terms and methods long

known in the art of data warehouse design and implementation.

Silverston et al (The Data Model Resource Book: A Library of Logical Data

Models and Data Warehouse Designs, Wiley, 1997) also teaching designing and

implementing data warehouse from "a library of best models...a set of proven data

models and data warehouse designs for the core functions shared by most businesses."

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Robertson whose telephone number is 571-272-8220. The examiner can normally be reached on 8:15am to 5:15pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

dcr

DCR
8/27/07

Romain Jeanty
Primary Examiner
Art Unit 3623